

4. Install the spring (B, **Figure 17**) onto the ball retainer (A) shoulder.
5. Install the spring and ball retainer onto the lifter plate shoulder (C, **Figure 17**).
6. Make sure the clutch lever points toward the center of the change clutch.
7. Install the washer (A, **Figure 18**) onto the shift shaft.
8. Install the clutch cover as described in this chapter.

CLUTCH ASSEMBLIES

All models are equipped two clutch assemblies: centrifugal clutch (A, **Figure 23**) and the change clutch (B). The centrifugal clutch must be removed to access the change clutch.

CENTRIFUGAL CLUTCH AND PRIMARY DRIVE GEAR

The centrifugal clutch (A, **Figure 23**) can be removed with the engine installed in the frame.

Refer to **Figure 24**.

Special Tools

Before removing the clutch locknut, note the following:

1. The clutch drum must be locked in place when the clutch locknut (C, **Figure 23**) is loosened or tightened. The following tools can be used:
 - a. Honda clutch holder (part No. 07GMB-HA7010B).
 - b. Universal type strap wrench (**Figure 25**).

NOTE

If the engine is mounted in the frame, it may be difficult to hold the clutch drum with a strap wrench.

2. The Honda clutch puller (part No. 07933-HB3000A [**Figure 26**]) is required to pull the centrifugal clutch off the crankshaft.
3. The clutch locknut (A, **Figure 27**) is staked to a notch in the crankshaft. Purchase a new locknut for reassembly.

Removal/Installation

1. Remove the clutch cover as described in this chapter.

CAUTION

Be sure to unstake the clutch locknut where it contacts the crankshaft. This will prevent the nut from damaging the crankshaft threads as the nut is being removed.

2. Using a die grinder or other metal removal tool, unstake the clutch locknut from the groove in the

crankshaft (B, **Figure 27**). Cover nearby parts so that metal particles do not enter the clutch or engine.

3. Refer to *Change Clutch* in this chapter and secure the clutch drum with one of the tools listed. Loosen and remove the clutch locknut and washer (C, **Figure 27**). Discard the clutch locknut.

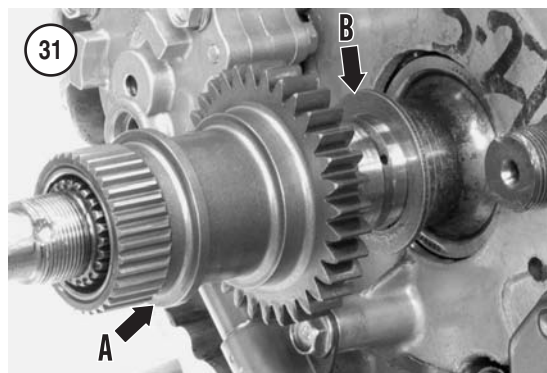
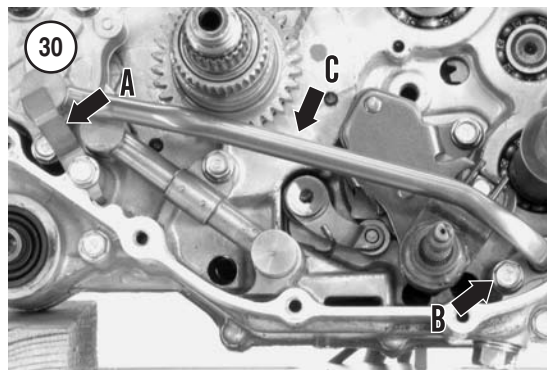
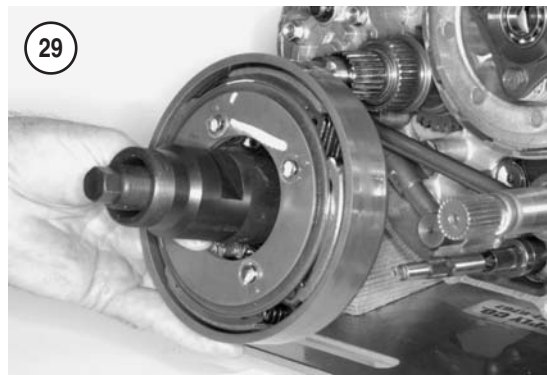
4. Thread the clutch puller (**Figure 28**) onto the drive plate threads. Hold the clutch puller body with a wrench and then turn its end bolt to pull the centrifugal clutch assembly off the mainshaft. See **Figure 29**.

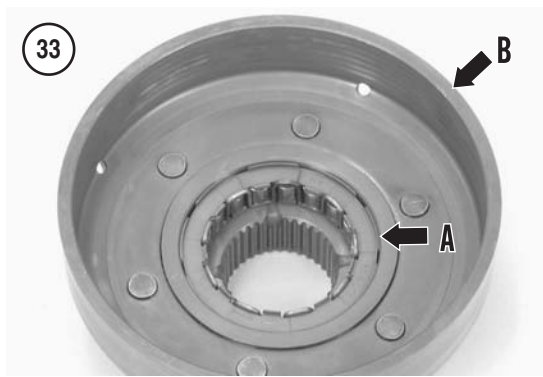
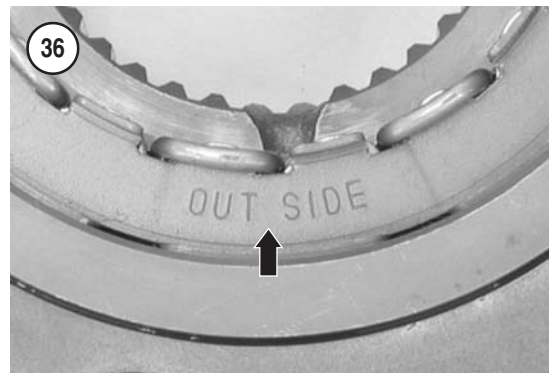
5. To remove the primary drive gear, perform the following:

- a. Remove the change clutch (B, **Figure 23**) as described in this chapter.
 - b. Remove the oil transfer pipe retaining bracket (A, **Figure 30**). Remove the retaining bolt (B, **Figure 30**), then remove the oil pipe (C).
 - c. Remove the primary drive gear (A, **Figure 31**) and washer (B).
6. Inspect the centrifugal clutch and primary drive gear as described in this section.
7. Install the primary drive gear and centrifugal clutch by reversing the preceding removal steps while noting the following:
- a. Lubricate the mainshaft, primary drive gear bore and washer with engine oil.
 - b. Lubricate the clutch weight linings (A, **Figure 32**) with engine oil.
 - c. Install the centrifugal clutch by first aligning the drive plate splines with the crankshaft splines, then rotate the clutch drum and align its splines with the primary drive gear splines.
 - d. Center a driver against the clutch hub and drive it onto the crankshaft until it bottoms.
 - e. Lubricate the washer and the threads of a new clutch locknut (A, **Figure 27**) with engine oil and install them.
 - f. Secure the clutch drum with the same tool used during removal, then tighten the centrifugal clutch locknut to 118 N•m (87 ft.-lb.). Stake the edge of the clutch locknut to the notch in the crankshaft (B, **Figure 27**).

Clutch Drum and One-Way Clutch Inspection

Refer to **Table 1** when measuring the clutch drum components (**Figure 24**) in this section. Replace parts that are out of specification or show damage.





1. Check one-way clutch operation as follows:
 - a. Place the assembled clutch assembly on the workbench as shown in **Figure 32**.
 - b. Hold the clutch drum (B, **Figure 32**) and turn the drive plate assembly counterclockwise (C).
 - c. The drive plate assembly should only turn counterclockwise (C, **Figure 32**). If the drive plate turns clockwise, the one-way clutch is faulty and must be replaced as described in this procedure.
2. Remove the drive plate assembly from the clutch drum.
3. Remove the one-way clutch (A, **Figure 33**) from the clutch drum. Inspect the one-way clutch for signs of heat damage, cracks or other damage. Replace the one-way clutch if it is damaged or if it failed to operate as described in Step 1.
4. Inspect the drive plate hub (**Figure 34**) for scoring, excessive wear or damage. Check for signs of overheating.
5. Inspect the exterior of the clutch drum (B, **Figure 33**) for cracks or damage. Check the clutch drum inside diameter for excessive wear or damage. Measure the clutch drum inside diameter (**Figure 35**) with a caliper and compare the measurement to the service limit in **Table 1**.
6. Lubricate the one-way clutch and the clutch drum bore with engine oil. Install the one-way clutch in the clutch drum with its OUTSIDE mark (**Figure 36**) facing out.
7. Inspect and service the centrifugal weight assembly as described in this section.
8. Inspect the primary drive gear as described in this section.

Centrifugal Weight Assembly Disassembly/Inspection/Reassembly

Refer to **Table 1** when measuring the centrifugal weight components (**Figure 24**) in this section. Replace parts that are out of specification or damaged.

1. Disassemble the centrifugal weight assembly as follows:

- a. Remove the E-clips (**Figure 37**), outer washer, clutch spring and inner washer.
- b. Remove the weight springs (A, **Figure 38**) and clutch weight arms (B).

2. Measure the thickness of each weight lining at the points shown in **Figure 39**. If it is out of specification, replace all of the clutch weight arms as a set.

3. Inspect the clutch spring plate (**Figure 40**) for cracks or signs of heat damage. Measure the height of the spring plate with a vernier caliper (**Figure 40**). Replace the spring plate if the height is not as specified in **Table 1**.

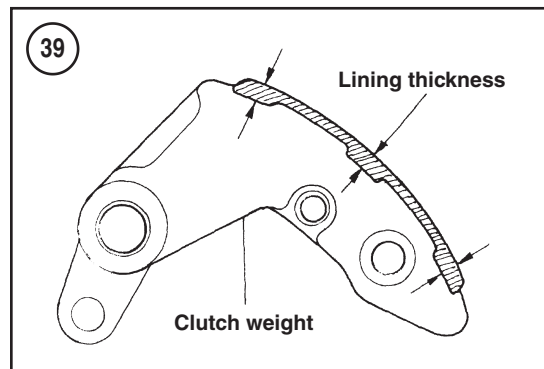
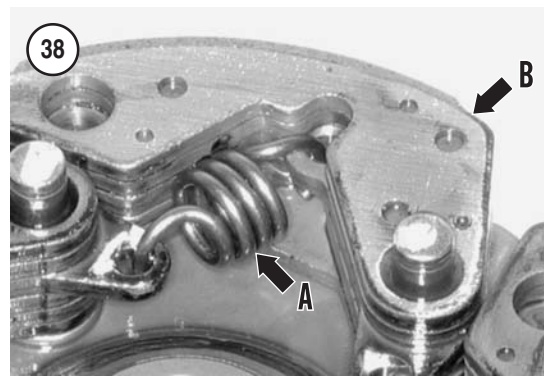
4. Inspect the weight springs (A, **Figure 38**) for cracks or stretched coils. Measure the free length of each spring with a vernier caliper. If it is out of specification, replace all of the springs as a set.

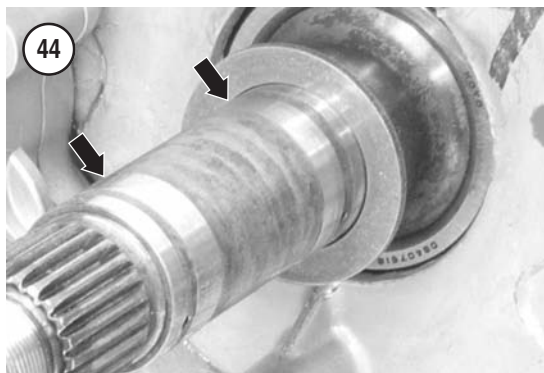
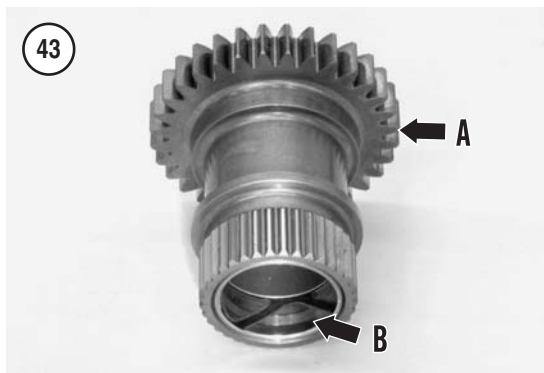
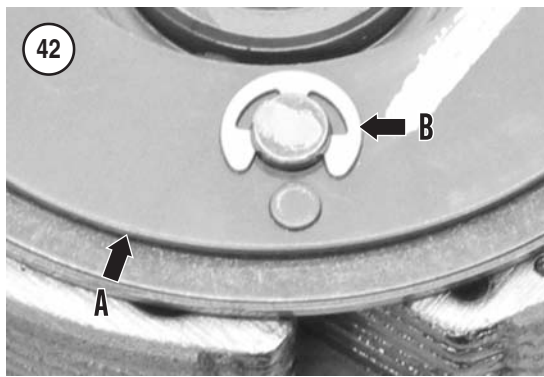
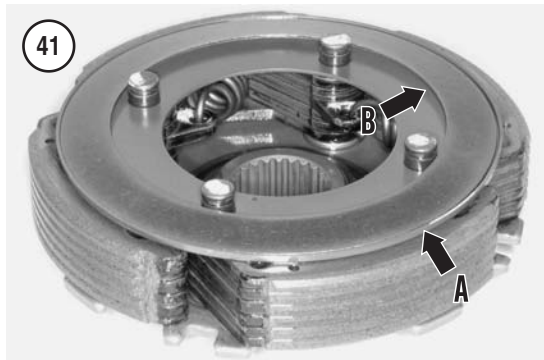
5. Examine the outer and inner washers and replace them if they are cracked or damaged.

6. Inspect the drive plate for damaged splines, warp or damaged clutch weight pins. Check the E-clip groove in the end of each pin for damage.

7. Reassemble the clutch weight assembly as follows:

- a. Lubricate the drive plate pins with engine oil.
- b. Install the clutch weights and weight springs. Install the weight springs with their open ends facing down.
- c. Install the inner washer (A, **Figure 41**) with the lip facing up.
- d. Install the spring plate (B, **Figure 41**) with the cupped side facing in.
- e. Install the outer washer (A, **Figure 42**) with the locating pins facing out.
- f. Secure the drive plate in a vise by applying just enough pressure to compress the spring plate and expose the clip grooves in the end of each drive plate pin. Install the E-clips with the open end of each E-clip toward the corresponding locating pin on the outer washer (B, **Figure 42**). Make sure each E-clip seats in its groove completely.





- g. Remove pressure from the drive plate and Make sure the outer washer seats evenly against each E-clip.

Primary Drive Gear Inspection

Refer to **Table 2** when measuring the primary drive gear components in this section. Replace parts that are out of specification or damaged.

1. Clean and dry the primary drive gear and washer.
2. Examine the primary drive gear (A, **Figure 43**) for:
 - a. Worn or damaged gear teeth or splines.
 - b. Scored or damaged outer bearing surface.
 - c. Worn or damaged bushings.
3. Measure the inside diameter of the bushing (B, **Figure 43**) at each end of the gear. Replace the primary drive gear if either bushing diameter is out of specification.
4. Measure the crankshaft outside diameter at the two drive gear bushing operating locations shown in **Figure 44**. Replace the crankshaft if either dimension is out of specification.

6

CHANGE CLUTCH

The change clutch (B, **Figure 23**) can be removed with the engine installed in the frame.

Refer to **Figure 45** when servicing the change clutch assembly.

Special Tools

Before removing the clutch locknut, note the following:

1. The clutch locknut (**Figure 46**) is staked to a notch in the mainshaft. Purchase a new locknut for reassembly.
2. When loosening and tightening the clutch locknut (**Figure 46**), some means of holding the change clutch will be required. The following list suggests methods for holding the clutch.
 - a. The Honda clutch center holder (part No. 07JMB-MN50300 [**Figure 47**]) is designed to hold the clutch when the clutch locknut is loosened and tightened.
 - b. Use an air impact wrench and air compressor. This tool setup can be used to loosen the clutch locknut. However, when tightening the

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